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References:

- Becking, J. H. 1975. New evidence of the specific affinity of *Cuculus lepidus* Muller. *Ibis* 117: 275-84.
- Becking, J. H. 1981. Notes on the breeding of Indian cuckoos. *J. Bombay Nat. Hist. Soc.* 78: 201-231.
- Hitoshi, N., Asama, S., & Biun, A. 1996. *A photographic guide to the birds of Mt. Kinabalu, Borneo*. Bun-ichi Sogoshuppan, Tokyo.
- Madoc, G. C. 1956. Observations on two Malayan Cuckoos. *Malay. Nat. J.* 10: 97-103.
- Payne, R. M. 1997. Family Cuculidae (Cuckoos). Pp. 508-610 in: del Hoyo, J., Elliot, A., & Sargatal J. eds. *Handbook of the birds of the world*. Vol. 4 Sandgrouse to Cuckoos. Lynx Edicions, Barcelona.
- Phillipps, Q. 1970. Some important nesting notes from Sabah. *Sabah Soc. J.* 5: 141-144.
- Sheldon, F. H., Moyle, R. G., & Kennard, J. 2001. Ornithology of Sabah: history, gazetteer, annotated checklist, and bibliography. *Ornith. Monogr.* 52: 1-278.
- Wells, D. R. 1982. A confirmation of the specific relations of *Cuculus saturatus indulindeae* Hartert. *Bull. Brit. Orn. Cl.* 102: 62-3.
- Wells, D. R. & Becking, J. H. 1975. Vocalizations and status of Little and Himalayan Cuckoos, *Cuculus poliocephalus* and *C. saturatus*, in Southeast Asia. *Ibis* 117: 366-71.
- Yamashina, Y. 1961. *Birds of Japan. A field guide*. Tokyo News Service Ltd., Tokyo.

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A review of the neotropical nightjar species group *Caprimulgus maculosus*, *C. nigrescens* and *C. whitelyi*

by Johan Ingels

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Three South American nightjars, the Cayenne Nightjar *Caprimulgus maculosus*, the Blackish Nightjar *C. nigrescens* and the Roraiman Nightjar *C. whitelyi*, form a species group. The Blackish Nightjar is widespread throughout the Amazon basin and the Guianan plateau. Ingels & Ribot (1983), Ingels *et al.* (1984) and Roth (1985) have documented its life history in Suriname and southwestern Brazil respectively. Both the other nightjars have a very limited distribution (Cleere 1998). The Cayenne Nightjar is known from one specimen only, a male collected in French Guiana. The Roraiman Nightjar is restricted to the subtropical zone of the Pantepuí region in the border area

of Venezuela, Guyana and Brazil. Nothing is known about the natural history of the Cayenne Nightjar, and knowledge of the Roraima Nightjar is limited to its habitat choice (Meyer de Schauensee & Phelps Jr. 1978).

This paper presents a review of the nomenclature, physical characters and preferred habitats of these closely related *Caprimulgus* species.

Material

C. maculosus: I examined the only known specimen of this species, the holotype (CMNH 60854, male), collected by Samuel M. Klages at Saut Tamanoir, French Guiana (05° 09' N, 53° 45' W) on the Mana River, c. 10 km above its confluence with the Kokioko (or Cockioco) River and now in the Carnegie Museum of Natural History, Pittsburgh, U.S.A. I compared it with eight male *C. nigrescens* specimens in the same collection. One of these (CMNH 61919) was collected at the same locality where the *C. maculosus* specimen was collected.

During 24 August – 4 September 1974 and 1-3 May 1979, I visited the coastal area between Saint-Laurent-du-Maroni and Cayenne where habitats similar to those at Saut Tamanoir are found.

C. nigrescens: I examined 166 specimens (85 males, 74 females, 7 unsexed) in the following museums: Los Angeles County Museum of Natural History, Los Angeles, U.S.A. (4); Carnegie Museum of Natural History, Pittsburgh, U.S.A. (14); American Museum of Natural History, New York, U.S.A. (102); Nationaal Natuurhistorisch Museum, Leiden, Holland (18) and The Natural History Museum, Tring, U.K. (28).

I spent 425 hours studying *C. nigrescens* in the field in Suriname (Ingels & Ribot 1983) during three visits of four weeks each (6 April – 5 May 1979, 30 March – 28 April 1980 and 12 October – 8 November 1981).

C. whitelyi: I examined the male holotype (BMNH 1888.8.1.96) and the female (BMNH 1888.8.1.97) described and mentioned by Salvin (1885) and now in The Natural History Museum (Tring, U.K.). In addition, I received mensural data of eight specimens (4 males, 4 females) in the Colección Ornitológica Phelps (Caracas, Venezuela) and details of three spirit specimens in the National Museum of Natural History (Washington, U.S.A.).

Results and Discussion

Nomenclature

In the original description of Cayenne Nightjar, *Nyctipolus* (now *Caprimulgus*) *maculosus*, Todd (1920) presented no etymological grounds for his choice of the specific name *maculosus*, meaning « speckled » or « spotted », from the Latin *maculae* = « spots ». Whether the name refers to the white markings in the wings and tail, or to the distinct, broad, blackish mesial streaks on the pileum, is not clear. *C. nigrescens*

and *Antrostomus* (now *Caprimulgus*) *whitelyi* had been described earlier by Cabanis (1848) and Salvin (1885) respectively. White markings in the wings and tail are found in males of all three species, whereas distinct black mesial streaks on the pileum are typical for *C. maculosus* only (see Description).

The Blackish Nightjar was first collected in 1842, by Robert Schomburgh, on the lower Essequibo River, Guyana, at 06° 59' N, 58° 23' W. It is indeed the darkest coloured of all neotropical caprimulgids. However the choice by Cabanis (1848) of the specific name *nigrescens*, i.e. the present participle of the Latin verb *nigrescere* = « to become black », should rather have been *nigricans*, i.e. the present participle of the Latin verb *nigricare* = « to be black(ish) ».

The first specimens of the Roraiman Nightjar (Roraima Nightjar in Meyer de Schauensee 1966) were collected in 1883 by Henry Whitely on the Cerro (or Monte = hill, mount) Roraima (Estado Bolívar, Venezuela; 05° 12' N, 60° 44' W). This is a steep-sided tabletop mountain in the highlands at the junction of Venezuela, Guyana and Brazil (Paynter 1982).

Salvin (1885) named the species after the collector, Henry Whitely. The correct specific name is therefore *whitelyi* (Peters 1940, Meyer de Schauensee & Phelps Jr. 1978, Howard & Moore 1980), not *whiteleyi* (Meyer de Schauensee 1970, Gruson 1976, Clements 1978, Walters 1980) or *whitleyi* (Meyer de Schauensee 1966).

Description

The mean wing chord lengths (mm) of males are 139 (N = 1) for *C. maculosus*, 138 (132-141, S.D. = 3, N = 18) for *C. nigrescens* and 156 (154-162, S.D. = 4, N = 4) for *C. whitelyi*. Total body length of *C. maculosus* and of *C. nigrescens* is c. 20 cm; *C. whitelyi* is slightly longer, c. 22 cm.

The cryptic colour patterns of caprimulgids are hard to describe. Personal experience, with *C. nigrescens* specimens in museums and with live *C. nigrescens* in the field, shows that the extent to which the white throat patch is visible depends largely on the preparation of the skin, or on the live bird's posture e.g. roosting, incubating, excited. The "large white patch on either side of the lower throat" and the "very narrow, indistinct tawny collar, barred brown" of *C. maculosus* (Cleere 1998) is largely a consequence of preparation of the unique skin. The elongated form of skins "enlarges" the throat and neck areas and exaggerates the white throat patch and the tawny collar. In the field these distinctive characters would hardly be visible in a roosting *C. maculosus*.

Males of all three species have white markings in the wings and tail but the locations vary between species (Table 1). In primaries, the white patches are situated where the outer web broadens. *C. whitelyi* has markings in the form of a narrow bar, rather than spots as in *C. nigrescens* and *C. maculosus*. In rectrices, the white patches are found at the tips. Although there is some variation in the amount of white in the tail and in the wings, probably an age-related phenomenon (Ingels & Ribot 1982), the general pattern is species related.

Females of *C. nigrescens* and *C. whitelyi* have the same general colour pattern as males, except for the pattern of wing and tail patches. The female of *C. maculosus* appears to be unknown, so whether she has a pattern of white or rufous-buff wing and tail markings is therefore uncertain. An unidentified nightjar was caught by hand and later released by Dujardin (pers. comm. 1986) in 1982, near Saül (03° 35' N, 53° 12' W) in the interior of French Guiana. The 10th and 9th primaries had a yellowish-brown and a yellowish-white patch in the outer and inner web respectively. The 8th and 7th primaries had a whitish patch on both outer and inner web. The tail showed whitish tips to both the 4th and 3rd rectrices. Although Dujardin first thought this bird to be a male *C. nigrescens* with an aberrant pattern of yellowish-white and yellowish-brown wing patches, he later referred to the bird he caught as having been a female *C. maculosus* (Collar *et al.* 1992). However, nightjars generally moult their primaries descendantly, i.e. outwards, and immature males often have tawny, buff or buffish-white primary markings instead of the white markings of adults. Thus the unidentified nightjar could have been a moulting young male *C. maculosus* having

TABLE 1

Pattern of white wing and tail patches in male *Caprimulgus maculosus*, *C. nigrescens* and *C. whitelyi*. Primaries and rectrices are counted from inside outwards. A patch is present when indicated with an x.

		<i>C. maculosus</i> N = 1	<i>C. nigrescens</i> N = 29	<i>C. whitelyi</i> N = 4
WING PATCHES				
Primaries	Web			
10th	Outer			X
	Inner	X		X
9th	Outer	X		X
	Inner	X	X	X
8th	Outer	X	X	X
	Inner	X	X	X
7th	Outer	X	X	
	Inner	X	X	
TAIL TIPS				
Rectrices	Web			
5th	Outer	X		
	Inner	X	X	
4th	Outer	X	X	
	Inner	X	X	X
3rd	Outer	X	X	
	Inner		X	X
2nd	Outer	X	X	
	Inner		X	

white adult markings in the moulted 7th and 8th primaries and yellowish immature ones in the unmoulted 9th and 10th primaries.

The females of *C. nigrescens* have no white markings at all in the wings and tail, while the females of *C. whitelyi* have a pattern of narrow tawny bars in the primaries and whitish tips to the tail, similar to that of males.

Habitats

C. maculosus: a male only of this species was collected. No details about the habitat in which the type specimen was found are known. Dujardin's presumed female was caught on the road from the village to the aerodrome of Saül in typical *C. nigrescens* habitat (Pelletier pers. comm.).

The Mana River, with many boulder-strewn rapids, is a river typical for the Guianan plateau. There are two types of habitat in the vicinity : an "open habitat" along the river itself, and a nearby "forest habitat". The *open habitat* is provided by large boulders and sand banks in the river, by sandy or stony riverbanks and by rare small savannah-like areas on the river banks. The *forest habitat* is formed by closed-canopy forest with scarce undergrowth, and with tree-fall openings and sometimes small, man-made clearings.

Although caprimulgids are known to occur wherever appropriate habitat occurs and to invade newly created surroundings that meet their low demands of suitability (Ingels *et al.* 1999), they normally occupy species-specific habitats. The two habitats described above where *C. maculosus* can be expected are found throughout French Guiana and the Guianan plateau. It is therefore surprising that only one specimen has ever been collected and that the species has not yet been observed in the field.

The grounds for Meyer de Schauensee's statement (1970) that the preferred habitat of this species is "dry open country" are unknown and probably speculative.

C. nigrescens: this nightjar prefers roadsides and sandy, gravelly or rocky open places in three particular biotopes: savannahs, forests and rivers. It is less common along sandy roads in more open savannahs with scattered bushes and more common along gravelly laterite roads through forest. It is also common on rocks or sandy islands in, and sandy banks along, rivers and on large granite outcrops in forests. *C. nigrescens* has two fundamental requirements to its habitat: it must be open and it must have scattered low vegetation and bushes, close to which it likes to roost and breed. It is therefore not found in grassy or densely overgrown savannahs or in the interior of primary or secondary forest.

This nightjar is widespread throughout the tropical part of the Amazon basin wherever appropriate habitat is available. It is a most successful coloniser, invading newly created surroundings that meet its low demands of habitat suitability e.g. recently opened roads (Ingels & Ribot 1983) and airstrips (Dick *et al.* 1984).

Klages collected both *C. maculosus* and *C. nigrescens* at or near Saut Tamanoir. Three specimens (CMNH 60854 of *C. maculosus* and CMNH 61919 and 62254 of *C.*

nigrescens) prove that both species can occur at least in the same locality, but not necessarily in the same habitat.

C. whitelyi: It prefers humid terrain with scattered and dense vegetation between 1,300 and 1,800 m altitude in the subtropical zone on the slopes and summits of the *tepúis* or tabletop mountains in the Guianan highlands (Meyer de Schauensee & Phelps Jr. 1978). It shows a preference for open places (tree-falls, clearings) (Lentino pers. comm.). It has been collected on the Cerros Roraima, Duida, Jaua, Urutani and Ptaritepui (specimen COP 26899).

Thus, *C. whitelyi* is a species endemic to the higher slopes and summits of the *tepúis*. It may be more common than the few specimens suggest as few *tepúis* have been explored well.

In the tropical zone between 100 and 1,100 m altitude on the lower slopes of these same tabletop mountains, *C. nigrescens* has also been collected e.g. specimen COP 32344 on Cerro Ptaritepui (05° 46' N, 61° 46' W) (Perez pers. comm.). However, although both species do occur on slopes of the same *tepúis*, their habitats are clearly separated by altitude.

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References:

- Cabanis, J. 1848. In Schomburgh, R. (ed.), *Reisen in British Guiana in den Jahren 1840-1844, Vol.III (Birds, pp.533-1260)*. Verlagshandlung J.J.Weber, Leipzig.
- Cleere, N. 1998. *Nightjars. A guide to nightjars and related nightbirds*. Pica Press. Nr. Robertsbridge.
- Clements, J.F. 1978. *Birds of the world: a check list*. Two Continents Publishing Group Ltd. New York.
- Collar, N.J., Gonzaga, L.P., Krabbe, N., Madroño Nieto, A., Parker, T.A. & Wege, D.C. 1992. *Threatened birds of the Americas : the ICBP/IUCN Red Data Book*. International Council for Bird Preservation. Cambridge (UK).
- Dick, J.A., McGillivray, W.B. & Brooks, D.J. 1984. A list of birds and their weights from Saül, French Guiana. *Wilson Bull.* 96: 347-365.
- Gruson, E.S. 1976. *A checklist of the birds of the world*. Collins. London.
- Howard, R. & Moore, A. 1980. *A complete checklist of the birds of the world*. Oxford Univ. Press.
- Ingels, J. & Ribot, J.-H. 1982. Variations in the white markings of the Blackish Nightjar *Caprimulgus nigrescens*. *Bull. Brit. Orn. Cl.* 102: 119-122.
- Ingels, J. & Ribot, J.-H. 1983. The Blackish Nightjar, *Caprimulgus nigrescens*, in Suriname. *Gerfaut* 73: 127-146.
- Ingels, J., Ribot, J.-H. & de Jong, B.H.J. 1984. Vulnerability of eggs and young of the Blackish Nightjar (*Caprimulgus nigrescens*) in Suriname. *Auk* 101: 388-391.
- Ingels, J., Oniki, Y. & Willis, E.O. 1999. Opportunistic adaptations to man-induced habitat changes by some South American Caprimulgidae. *Rev. Bras. Biol.* 59: 563-566.
- Meyer de Schauensee, R. 1966. *The species of birds of South America*. Livingston Publishing Co. Wynnewood (PA).

- Meyer de Schauensee, R. 1970. *A guide to the birds of South America*. Livingston Publishing Co. Wynnewood (PA).
- Meyer de Schauensee, R. & Phelps, W.H. Jr 1978. *A guide to the birds of Venezuela*. Princeton Univ. Press.
- Paynter, R.A.Jr. 1982. *Ornithological gazetteer of Venezuela*. Mus.Comparative Zoology, Cambridge (MA).
- Peters, J.L. 1940. *Check-list of birds of the world, Vol.IV*. Mus.Comparative Zoology, Cambridge (MA).
- Roth, P. 1985. Breeding biology of the Blackish Nightjar, *Caprimulgus nigrescens*, in western Brazil. *Gerfaut* 75: 253-264.
- Salvin, O. 1885. A list of birds obtained by Mr. Henry Whitely in British Guiana. *Ibis* 3: 195-219.
- Todd, W.E.C. 1920. Descriptions of apparently new South American birds. *Proc. Biol. Soc. Washington* 33: 71-76.
- Walters, M. 1980. *The complete birds of the world*. David & Charles. London.

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An early contribution to the avifauna of Paraná, Brazil. The Arkady Fiedler expedition of 1928/29

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Among Brazilian states, Paraná possesses one of the best-studied avifaunas (e.g. Straube & Bornschein 1995, Anjos & Schuchmann 1997). Only recently, Scherer-Neto & Straube (1995) published a comprehensive summary of its ornithological history together with a detailed list of all bird species credibly recorded for the state. A major contribution to this knowledge was supplied by Polish ornithologists in the first two decades of the 20th century. Tadeusz Chrostowski (1878-1923) conducted field work from December 1910 to January 1911 and again in the last months of 1913. Together with Tadeusz Jaczewski and S. Borecki, Chrostowski again went to Paraná, and between 1921 and 1924 (after 1923 only Jaczewski), they collected specimens of c. 260 species and subspecies of birds (Gebhardt 1964, Scherer-Neto & Straube 1995). The ornithological results of their expeditions were edited by Chrostowski (1912, 1921, 1922-1923), and later by Jaczewski (1925), Domaniewski (1925), Sztolcman (1926a, 1926b), and Sztolcman & Domaniewski (1927).

While these data are properly documented, the work of Arkady Fiedler appears to have been neglected. Born in Poznań (named Posen and located in the Prussian province of the same name in Germany at that time) on 28 November 1894, he started a versatile career as a poet. In 1927, he began to travel to many countries in all continents. Collecting zoological specimens for natural history museums, he